

Abstract

A device for channeling boiler flue gas flow and injecting controlled amounts of ammonia upstream of a selective catalytic reduction (SCR) NO_x removal system. A perforated plate and/or damper can be located within one or more channels to provide volumetric control through a channel. Flow conditioning devices such as static mixing tabs and/or flow straightening tube bundles can optionally be included in each channel to improve mixing and velocity profiles. Gas flow rate measurements made, for example via pressure taps, within one or more channels can be used to measure flow and provide feedback for improved ammonia-to-NO_x mole ratio control.

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